

Cancer (Malignant Neoplasms)
Summary of Methods and Data for Estimates of Cost of Illness

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|---|-----------------|
| 1. Estimated Total Economic Cost | \$ 96.1 billion |
| Estimated Direct Cost | \$ 27.5 billion |
| Estimated Indirect Cost | \$ 68.7 billion |
| Reference Year | 1990 |
| IC Providing the Estimate | NCI |
| | |
| Direct Costs Include: Other related nonhealth costs | No |
| Indirect Costs Include: | |
| Mortality costs | Yes |
| Morbidity costs: Lost workdays of the patient | Yes |
| Morbidity costs: Reduced productivity of the patient | No |
| Lost earnings of unpaid care givers | No |
| Other related nonhealth costs | No |
| Interest Rate Used to Discount Out-Year Costs | 4 % |
| 2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM) for all diseases whose costs are included in this estimate: <u>140(4)-208.</u> | |
| 3. Estimate Includes Costs: | |
| Of related conditions beyond primary, strictly coded ICD-9-CM category | No |
| Attributable to the subject disease as a secondary diagnosis | No |
| Of conditions for which the subject disease is an underlying cause | No |
| 4. Population Base for Cost Estimate (Total U.S. pop or other) | Total U.S. pop. |
| 5. Annual (prevalence model) or Lifetime (incidence model) Cost: | Annual |
| 6. Perspective of Cost Estimate (Total society, Federal budget, or Other) | Total society |
| 7. Approach to Estimation of Indirect Costs | Human capital |
| | |
| 8. <u>Source of Cost Estimate:</u> (Reference published or unpublished report, or address and telephone of person/office responsible for estimate) | |

Brown ML, Fintor L. The economic burden of cancer. In Greenwald P, Kramer BS, Weed DL, eds. Cancer Prevention and Control. New York: Marcel Dekker, Inc., 1995 pp. 69-81.

9. Other Indicators of Burden of Disease:

In 1999, the estimated number of new cancer cases is expected to be 1,221,800, and an estimated 563,100 deaths from cancer are expected (1). In 1995 an estimated 8.2 million person-years of life were lost due to premature mortality from cancer (2). In 1990, the reference year for the cost estimates, there were an estimated 1,040,000 new cases of cancer, an estimated 505,295 deaths were due to cancer, and an estimated 7.8 million person-years of life were lost because of premature mortality due to cancer. The following URLs provide additional information on cancer incidence and death rates: <http://www.seer.ims.nci.nih.gov/>; <http://dccps.nci.nih.gov/DCCPS>; <http://jnci.oupjournals.org/cgi/content/full/91/8/675>)

10. Commentary:

Malignant neoplasms excludes basal and squamous cell skin and in situ carcinomas except urinary bladder. This estimate is an update of an estimate by Rice et al. (3) of the economic burden of cancer in 1985. Two basic adjustments are applied to update the estimates from 1985 to 1990. First, the overall burden of disease is adjusted by using data on cancer incidence from the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) program and cancer mortality data from the National Center for Health Statistics. Second, cost per case is adjusted for using appropriate indicators of inflation. In the case of direct costs, the inflation in cancer care costs was adjusted by using the Fixed Weight Price Index of the Health Care Financing Administration. In the case of indirect cost the "human capital" costs of morbidity and mortality were adjusted using the average value of wage earnings from the U.S. Bureau of Labor Statistics. [For more details on methods and data sources see reference (4).] This estimate is similar, but not identical to, the result reported in Brown (5) which used similar methods but somewhat different adjustment factors.

References

1. Cancer Facts & Figures-1999. American Cancer Society, Atlanta Georgia, 1999. Excludes basal and squamous cell skin and in situ carcinomas except urinary bladder. Incidence projections are based on rates from the NCI SEER Program 1979-1995.
2. Ries LAG, Kosary CL, Hankey BF, Harras A, Miller BA, Clegg L, Edwards BK (eds). SEER Cancer Statistics Review, 1973-1996: Tables and Graphs, National Cancer Institute. Bethesda, MD, NIH Publ. No.99-2789;1999
3. Rice DP, Hodgson TA, Capell F. The economic burden of cancer, 1985: United States and California. In Sheffler RM, Andrews NC, eds. Cancer Care and Costs. Ann Arbor, Mich: Health Administration Press, 1989, pp. 39-59.
4. Brown ML, Fintor L. The economic burden of cancer. In Greenwald P, Kramer BS, Weed DL, eds. Cancer Prevention and Control. New York: Marcel Dekker, Inc., 1995, pp. 69-81.
5. Brown ML. The national economic burden of cancer. Journal of the National Cancer Institute. 1990;82:1811-1814.